



Mr. Mark Chambers
Senior Program Coordinator
Great Lakes Area of Concern
Regional Director General's Office – Ontario
Environment & Climate Change Canada
867 Lakeshore Rd., Burlington, Ontario L7S 1A1

January 4, 2017

RE: Eutrophication or Undesirable Algae Beneficial Use Impairment for Sault Ste. Marie, Ontario

Dear Mr. Chambers,

On behalf of the Binational Public Advisory Council (BPAC) for the St. Marys River Area of Concern (AOC), we are writing to convey agreement regarding the removal of the Eutrophication or Undesirable Algae Beneficial Use Impairment from the Canadian side of the AOC.

The restoration criteria for this BUI states that “This beneficial use will no longer be impaired when comprehensive tests of the Area of Concern’s water quality demonstrate the river is free from persistent or reoccurring problems associated with oxygen stress (eutrophication) and large algal blooms, as determined through a comparison to established guidelines for the relevant physical and chemical parameters”. This criteria appears to have been met, as data collected through the 2013-2015 water quality study conducted by Algoma University showed no indication of oxygen stress, large algal blooms, high concentrations of chlorophyll a, or excessive nutrient loading. More specifically, water quality parameters (e.g., pH, DOC, total suspended solids, turbidity, chlorophyll a, temperature, dissolved oxygen, total phosphorus, total nitrogen and conductivity) tended to be, on average, within the range of water quality guideline values. That said, we note that the Echo Bay sampling location consistently had poorer water quality relative to the other sites investigated, and as such, future water quality monitoring endeavors should include the Echo Bay area as a sampling location.

Although *Didymo* has been recently observed in the rapids near Sault Ste. Marie, we understand that the presence of this potentially nuisance diatom may be indicative of low nutrient conditions, as opposed to the nutrient-enriched conditions typically associated with other algal blooms. As such, it does not appear that *Didymo* is related to the typical causes of most impairments within the Great Lakes Areas of Concern. Thus, with these factors considered, BPAC members present at the October 27th 2016 meeting voted unanimously to support the removal of this BUI.

Sincerely,

Paula Antunes, Ph.D.
Canadian BPAC Chair

Emily Martin
U.S. 1st Vice Chair